



ASAHIKLIN AE-3000 Series

**Environmentally Friendly
Fluorinated Fluids**

From the creators of
AsahiKlin AK-225 Fluorinated Solvents

AGC

Your Dreams, Our Challenge



About Us

AGC Chemicals Americas, Inc. offers the world's broadest range of high performance fluorochemicals including fluoropolymer resins, custom compounds, fluoroelastomers and specialty materials. As a wholly-owned subsidiary of century-old AGC Inc. in Japan, AGC Chemicals Americas, Inc. formed in 2004 as a merger between Asahi Glass America and Asahi Glass Fluoropolymers.

AGC Chemicals strives to look to the future in our approach to product development as it relates to environmental sustainability. **Thus, from the creators of AsahiKlin AK-225 high performance fluorosolvents, AGC Chemicals introduces AE-3000 Series environmentally friendly fluorinated fluids.**

Our Commitment to Quality

As an ISO 9001 and 14001 registered and certified company, we embrace a Quality Philosophy of total dedication to continual improvement. How we achieve this is by focusing on our customers' needs through partnerships and teamwork.

We are committed to valuing your feedback as an opportunity to improve our processes, products and ultimately your satisfaction.

ASAHIKLIN

AE-3000 Series

Our Pledge to the Environment: Chemistry for a Blue Planet



Chemistry
for a Blue Planet
AGC Chemicals

AGC Chemicals is committed to creating a safe, secure, comfortable and environmentally friendly world with chemical technology. We have adopted this pledge as our company's worldwide vision, thus inspiring the creation of our AsahiKlin AE-3000 series products among many other environmentally sound fluorinated chemicals and resins.

Nonflammable

The ASAHIKLIN series have no flash point, thus does not require explosion proof equipment.

Broad Compatibility

The ASAHIKLIN series can be used for a variety of customer applications.

Cost-saving

The ASAHIKLIN series have energy saving advantages and can reduce waste.



Stable

The ASAHIKLIN series are chemically and thermally stable.

Tailored Solvency

The ASAHIKLIN series have a broad range of material compatibilities.

ODP zero ^{*1}

The ASAHIKLIN series don't affect the Ozone Layers.

Lower GWP ^{*2}

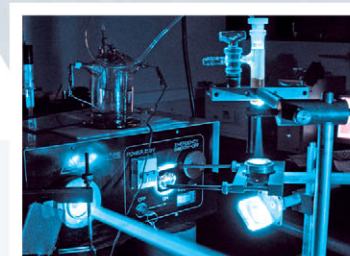
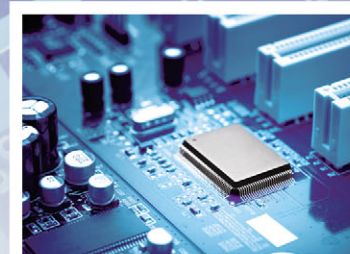
The ASAHIKLIN series have minimum Global Warming.

Recyclable

The ASAHIKLIN series can be recycled with distillation.

^{*1} ODP: Ozone Depletion Potential

^{*2} GWP: Global Warming Potential



AsahiKlin AE-3000 Series

The Fluorosolvent of the Future

AE-3000 series of environmentally fluorinated fluids were developed by AGC Chemicals as the solvents for tomorrow. They are modern cleaning agents having no flash point, no Ozone Depletion Potential (ODP), Low Global Warming Potential (LGWP), and low surface tension.

These solvents are approved for uses as a precision cleaning solvent, defluxing agent for electronic circuitry, carrier solvent for silicone and fluorinated lubricants, and as a moisture displacement fluid. AE-3000 series are designed to replace halogenated solvents with unfavorable environmental properties or that have safety concerns. AE-3000 formulations can be used in most existing vapor degreasing equipment with little or no modification.

Supply Chain Management Solutions created with your needs in mind

AsahiKlin AE-3000 series products are stored in strategic satellite warehouses throughout the USA and also can be purchased through AGC Chemicals authorized distributors. By maintaining regional supply in various packaging and weights, we can get you what you need when you need it.

Our dedicated and cross-functional Customer Service staff as well as our knowledgeable Technical Sales Representatives will support your business and strive to understand your requirements to ensure your success.

	AE-3000	AE-3000 AT	AE-3000 ATE	AE-3100E
Boiling Point (°C)	56	38	42	54
Freezing Point (°C)	-94	-49.3	-50	-90
Flashpoint and Flammability Range	None	None	None	None
Ozone Depletion Level (CFC -11=1)	0	0	0	0
Global Warming Potencial (CO ₂ 100 _{yr} ITH)	580 * ¹	268 * ²	257 * ²	580 * ¹
Packaging	20 kg Pail 300 kg Drum	20 kg Pail 250 kg Drum	20 kg Pail 250 kg Drum	20 kg Pail 250 kg Drum



*¹ Intergovernmental Panel on Climate/technology & Economic Assessment Panel Report in 2007

*² Calculated Value by the National Institute of Advanced Industrial Science and Technology (AIST)

ASAHIKLIN

Applications And Attributes

Precision Cleaning:

- High reliability products
- Hybrid alloys
- Precision metal components

Attributes

- Tailored solvency
- Good material compatibility
- Low surface tension
- Non-flammable / no flash point
- Recyclable through distillation

Carrier Fluid:

- Carrier solvent for fluorinated oils and greases
- Carrier solvent for silicone oils

Attributes

- Good coating performance
- Rapid drying
- Good wetting agent
- Non-flammable

Electronics Cleaning:

- RMA / RA fluxes
- No-clean fluxes
- Printed circuit boards (PCBs)

Attributes

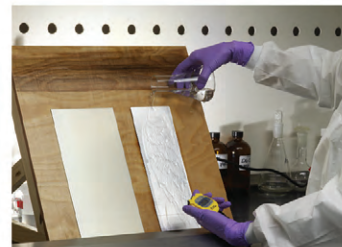
- Low surface tension
- Good material compatibility
- Non-flammable / no flash point
- Residue free
- Fast drying

Solvent Drying:

- Also known as “dewatering” or “moisture displacement”
- Final step after aqueous or alcohol cleaning

Attributes

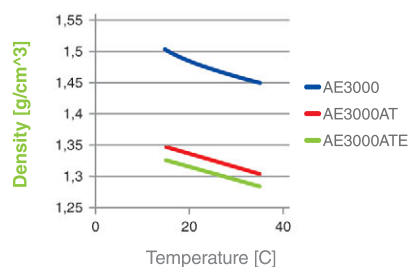
- Low surface tension
- Reduces drying time
- Residue free – no spots
- Broad range of material compatibility
- Recyclable through distillation



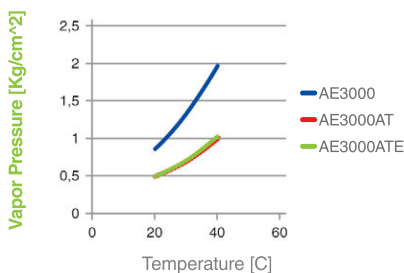
Performance Comparison Charts



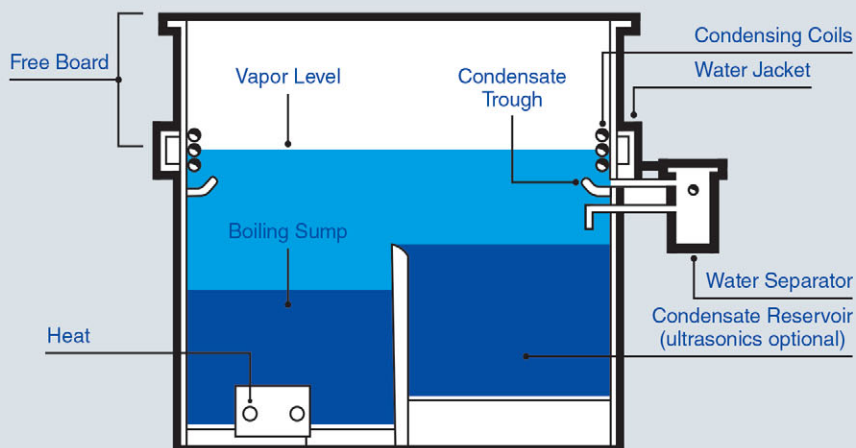
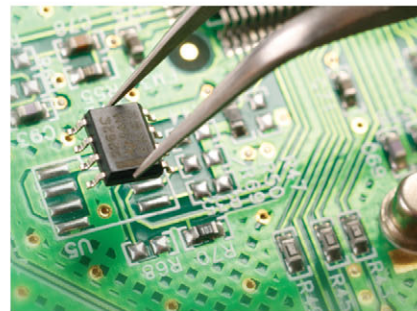
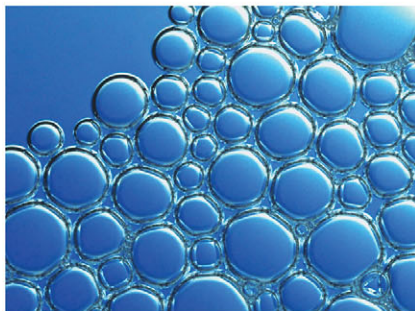
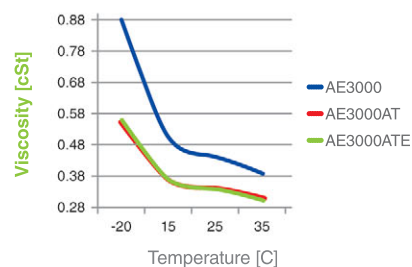
Density Vs. Temperature



Vapor Pressure Vs. Temperature



Viscosity Vs. Temperature



Cleaning Recommendations

It is recommended that Asahiklin AE-3000 Series fluorinated fluids be used in a vapor degreaser to optimize cleaning efficiency, economy, and emission control. Cleaning procedures for AsahiKlin AE-3000 Series products are quite similar to those of AK-225 precision cleaning solvents. The procedures consist of suspending a workload over the boiling solvent, rinsing or spraying with cool solvent and drying in solvent vapor.



Comprehensive Technical Solutions

At our state of the art technical center in Exton, Pennsylvania, AGC Chemicals offers personalized technical support by our industry experts with decades of experience. Here at our USA research and development hub, we support our customers' application development and product enhancement requirements with multiple laboratories that contain testing and full-size production equipment.

Examples of testing capabilities for AsahiKlin AE-3000 fluorinated fluids

- Development of precision cleaning processes
- Solvent composition analysis (purity, moisture, NVR, etc.)
- Compatibility studies involving plastics, elastomers and metals
- Vapor degreasing parts cleaning and defluxing
- Distillation studies
- Flashpoint testing
- Relative evaporation rate evaluations

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